

ATGGACAAAACTCACACATGTCCACCTTGTCCAGCTCCGGAACTCCTGGGGGGACCGTCA

1 -----+ 60
TACCTGTTTTGAGTGTGTACAGGTGGAACAGGTCGAGGCCTTGAGGACCCCCCTGGCAGT

- a M D K T H T C P P C P A P E L L G G P S -
 - GTCTTCCTCTCCCCCAAAACCCAAGGACACCCTCATGATCTCCCGGACCCCTGAGGTC
 61 ------+------+------+------+ 120
 CAGAAGGAGAAGGGGGGTTTTGGGTTCCTGTGGGAGTACTAGAGGGCCTGGGGACTCCAG
- a VFLFPPKPKDTLMISRTPEV -
 - ACATGCGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTG
 121 ------+ 180
 TGTACGCACCACCACCTGCACTCGGTGCTTCTGGGACTCCAGTTCAAGTTGACCATGCAC
- a TCVVVDVSHEDPEVKFNWYV -
 - GACGGCGTGGAGGTGCATAATGCCAAGACAAGCCGCGGGAGGAGCAGTACAACAGCACG
 181 -----+ 240
 CTGCCGCACCTCCACGTATTACGGTTCTGTTTCGGCGCCCCTCCTCGTCATGTTGTCGTGC
- a DGVEVHNAKTKPREEQYNST -
 - TACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTAC 241 ------+ 300 ATGGCACACCAGTCGCAGGAGTGGCAGGACGTGGTCCTGACCGACTTACCGTTCCTCATG
- a YRVVSVLTVLHQDWLNGKEY -
 - AAGTGCAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCCAAAGCC 301 ------+ 360 TTCACGTTCCAGAGGTTGTTTCGGGAGGGTCGGGGGTAGCTCTTTTGGTAGAGGTTTCGG
- a KCKVSNKALPAPIEKTISKA -
 - AAAGGCAGCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAGCTGACC
 361 -----+ 420
 TTTCCCGTCGGGGCTCTTGGTGTCCACATGTGGGACGGGGGTAGGGCCCTACTCGACTGG
- a KGQPREPQVYTLPPSRDELT -
 - AAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGTG
 421 ------+ 480
 TTCTTGGTCCAGTCGGACTGGACGGACCAGTTTCCGAAGATAGGGTCGCTGTAGCGGCAC
- a KNQVSLTCLVKGFYPSDIAV -
 - GAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCGTGCTGGAC 481 -----+ 540 CTCACCCTCTCGTTACCCGTCGGCCTCTTGTTGATGTTCTGGTGCGGAGGGCACGACCTG
- a EWESNGQPENNYKTTPPVLD -
 - TCCGACGCTCCTTCTTCCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAG
 541 -----+ 600
 AGGCTGCCGAGGAAGAAGAAGAGATGTCGTTCGAGTGGCACCTGTTCTCGTCCACCGTCGTC
- a SDGSFFLYSKLTVDKSRWQQ -
 - GGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAG

FIGURE 5 (cont'd)

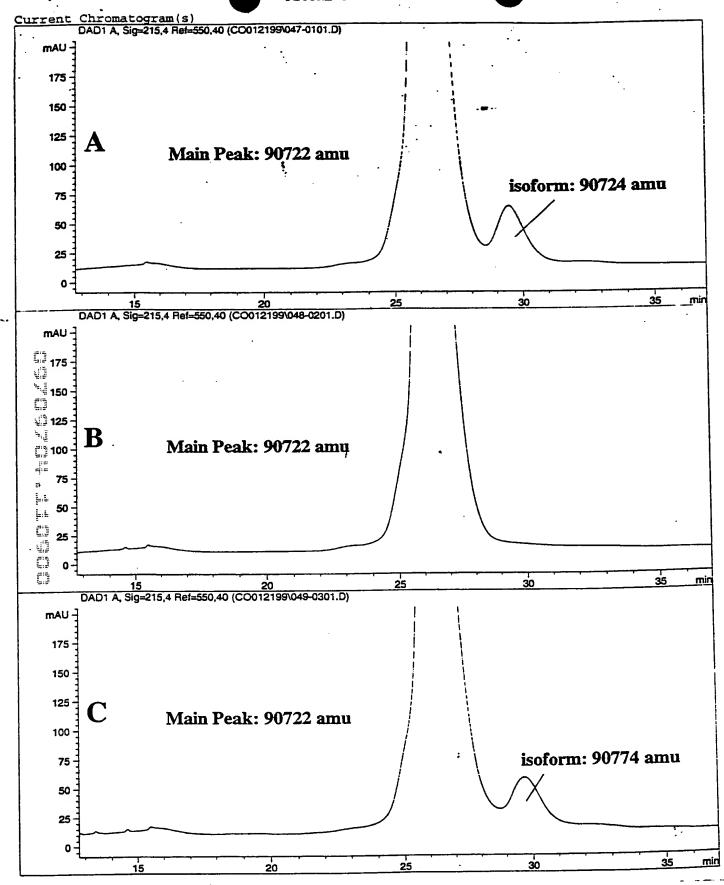
 ${\tt CCCTTGCAGAAGAGTACGAGGCACTACGTACTCCGAGACGTGTTGGTGATGTGCGTCTTC}$

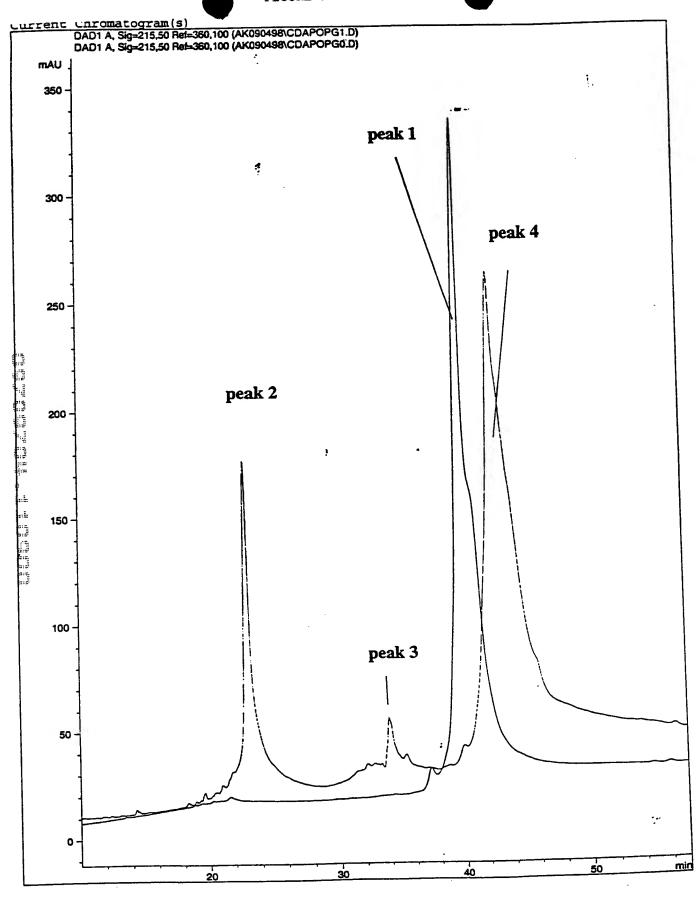
- a GNVFSCSVMHEALHNHYTQK-
 - AGCCTCTCCCTGTCTCCGGGTAAA 661 ------ 684 TCGGAGAGGGACAGAGGCCCATTT
- a SLSLSPGK

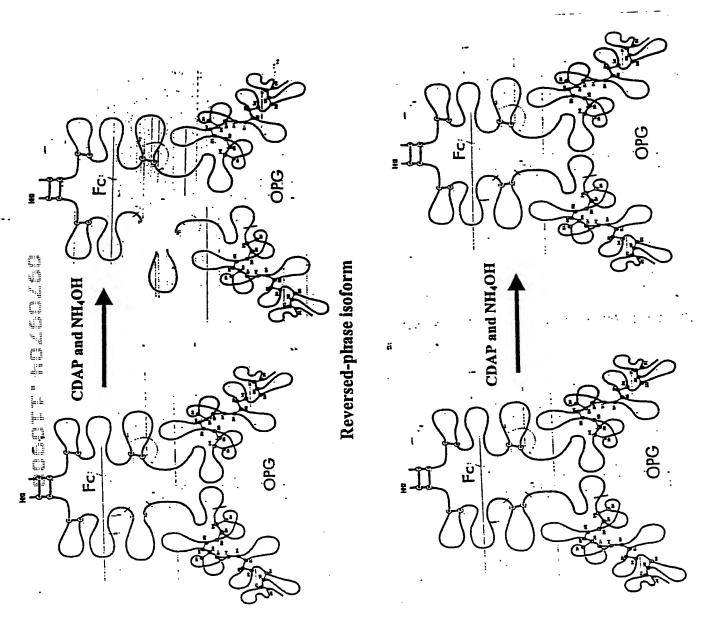
Cysteine—S-H +
$$H^+$$
 H^+ Cysteine—S-C=N

peptide

itz-peptide, mass gain of 26 Da







Reversed-phase main peak

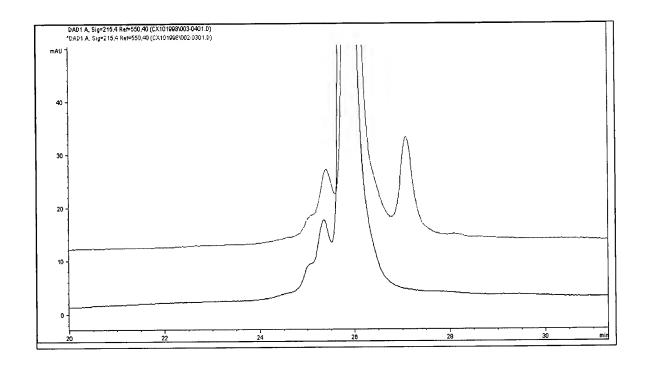


Figure 11. Reversed-phase HPLC of untreated (upper trace) and copper treated (lower trace) FcOPG.

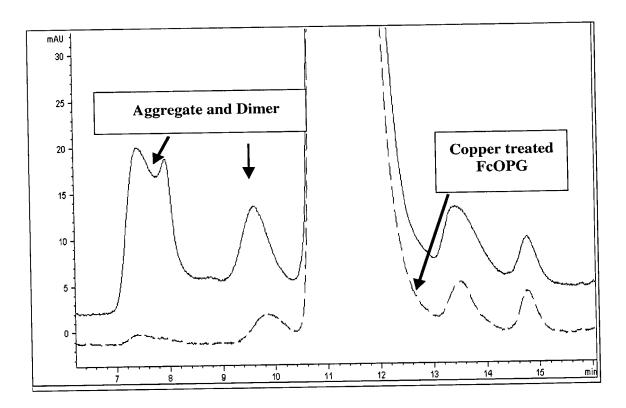


Figure 12. Size-exclusion HPLC of FcOPG after 2 years incubation at 29°C; copper treated FcOPG (lower trace) and untreated FcOPG (upper trace).